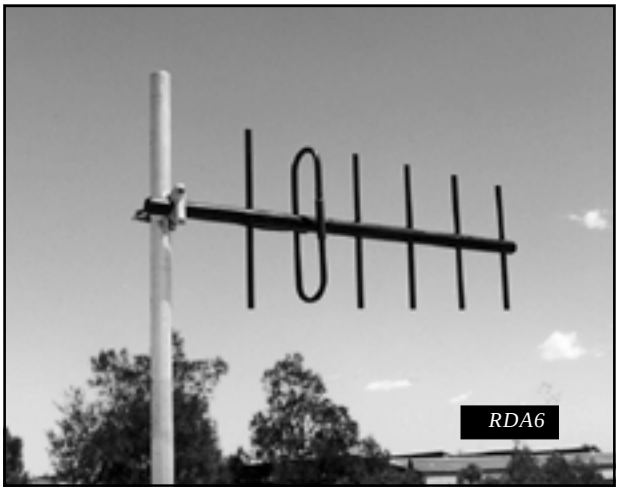
# RDA Series Ruggedised UHF Yagi Antennas

## 350-600 MHz

| | |
|---|---|
| **RDA6** | **9.0 dBd Gain** |
| **RDA9** | **12.0 dBd Gain** |
| **RDA16** | **14.0 dBd Gain** |




- All welded construction for maximum and reliable performance
- High front to back ratios - reducing interference to and from other systems
- Black powder coating aids in snow and ice shedding by maximising solar heat retention
- Ruggedised construction for use in extreme conditions
- Can be configured in stacks or bays for higher gain applications

**Bracing Rod Kit Available for RDA Series**

**Kit No. M-4529**

The RDA Series are ruggedised high gain yagi antennas which will provide excellent point to point communication in RF control, short or long haul link and other applications calling for highly directional antennas in extreme climatic environments. RDA Series antennas exhibit narrow beamwidths and high front to back ratios to help minimise any potential interference to and from other radio systems.

Built specifically for hostile conditions, the boom and the elements of the RDA Series yagis are significantly larger and more robust than on the standard YB range. The feed element is of full folded dipole construction for maximum bandwidth and performance and all elements, including the feed element are welded to the boom. Welding ensures both maximum strength and minimal potential for the generation of intermodulation and other interference products.

The entire welded assembly is etched and finished with a black powder coating which aids significantly in ice shedding by maximising solar heat retention.

Constructed with 6, 9 or 16 elements, RDA yagis can be configured in stacks or bays for higher gain applications in horizontally or vertically polarized systems. Application details on phasing and mounting yagi antennas are included in the technical notes section in the back of this catalogue.

RDA Yagis rest at direct DC ground potential and, properly earthed, provide excellent lightning protection and aid in the reduction of precipitation static noise.

Termination is via an 'N' female coaxial connector fitted to a short Durathene™ cable tail. Durathene™ cable provides superior resistance to weathering and abrasion and is less susceptible to bird attack than standard PVC sheathed cables.

# RDA Series Rugged UHF Yagi Antennas

## 350-600 MHz

**RDA6**
**RDA9**
**RDA16**

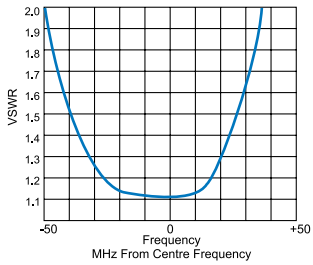
## Electrical

| Model No. | Gain (dBd) | Frequency (MHz) | Tuned Bandwidth | VSWR (at operating bandwidth) | Impedance (Ohms) | Vertical Beamwidth | Horizontal Beamwidth | Front to Back Ratio | Input Power (Watts) |
|---|---|---|---|---|---|---|---|---|---|
| RDA6-65 | 9.0 | 400-420 | Entired Specified Band | <1.5:1 | 50 | 43° | 50° | 18 dB | 100 |
| RDA6-61 | | 450-480 | | | | | | | |
| RDA6-62 | | 480-520 | | | | | | | |
| RDA6-99 | | 350-600 Specify | 20 MHz | | | | | | |
| RDA9-65 | 12.0 | 400-420 | Entired Specified Band | | | 35° | 45° | 16 dB | |
| RDA9-61 | | 450-480 | | | | | | | |
| RDA9-62 | | 480-520 | | | | | | | |
| RDA9-99 | | 350-600 Specify | 20 MHz | | | | | | |
| RDA16-65 | 14.0 | 400-420 | Entired Specified Band | | | 35° | 36° | 17 dB | |
| RDA16-70 | | 450-470 | | | | | | | |
| RDA16-71 | | 470-490 | | | | | | | |
| RDA16-63 | | 480-500 | | | | | | | |
| RDA16-72 | | 500-520 | | | | | | | |
| RDA16-99 | | 350-600 Specify | 20 MHz | | | | | | |

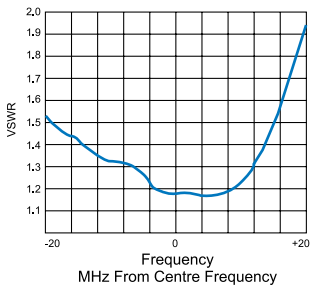
## Mechanical

| Model No. | No. of Elements | Construction | Length (m) | Weight (kg) | Termination | Windloading at 160kph (kg) | Projected Area (cm²) | Suggested Mounting |
|---|---|---|---|---|---|---|---|---|
| RDA6 Series | 6 | All welded aluminium frame, black powder coated. 12mm elements through mounted and welded to 32mm x 2mm boom section | 1.1 | 1.2 | N-female connector on short Durathene cable tail | 7.0 | 636 | 1 x UCR1 |
| RDA9 Series | 9 | | 1.5 | 1.7 | | 8.9 | 805 | |
| RDA16 Series | 16 | | 2.5 | 2.5 | | 15.2 | 1376 | |

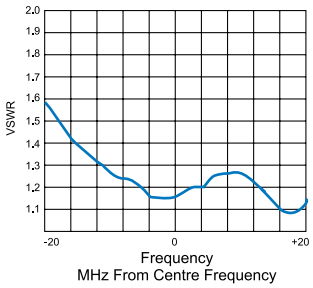
*Typical VSWR Response for RDA6*




*Typical VSWR Response for RDA9*




*Typical VSWR Response for RDA16*

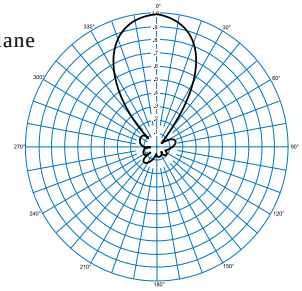



*See radiation patterns on page148.*

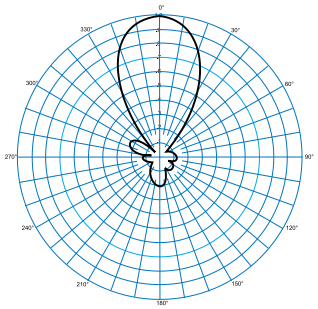
# RDA Series Yagi Antennas

## RDA6

E-Plane



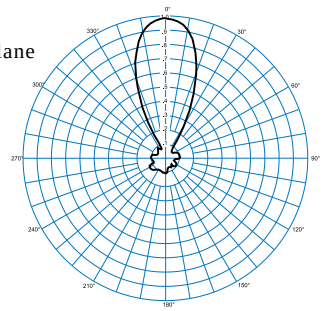
H-Plane



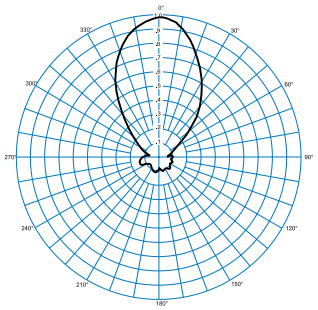
| | |
|---|---|
| Frequency | 480 MHz |
| Beamwidth E-Plane | 43° |
| Beamwidth H-Plane | 50° |
| Front/Back Ratio | 14 dB |
| Gain | 9 dBd |

## RDA9

E-Plane



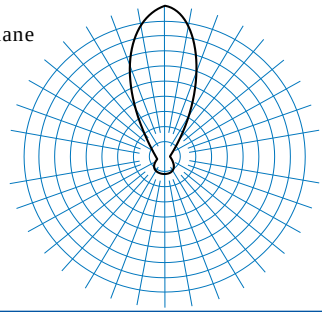
H-Plane



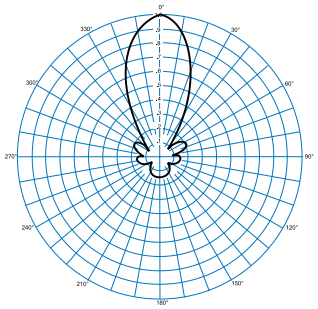
| | |
|---|---|
| Frequency | 460 MHz |
| Beamwidth E-Plane | 35° |
| Beamwidth H-Plane | 45° |
| Front/Back Ratio | 16 dB |
| Gain | 12 dBd |

## RDA16

E-Plane



H-Plane



| | |
|---|---|
| Frequency | 460 MHz |
| Beamwidth E-Plane | 35° |
| Beamwidth H-Plane | 36° |
| Front/Back Ratio | 17 dB |
| Gain | 14 dBd |

**NOTE**

*Although most of our UHF Yagi antennas are capable of covering more than their stated VSWR bandwidths, usable bandwidth is limited by the radiation pattern performance or pattern bandwidth. Pattern bandwidth is the frequency at which the antenna radiation pattern no longer conforms to specification and this degradation is usually noted at less than the measured VSWR bandwidth. Decreases in forward gain, front to back ratio, and an increase in side lobe levels are to be expected when operating outside the recommended bandwidths.*